New Vision of a School

In order to be effective, the preceding school resources need to be quilted together in a holistic school vision that is much more effective – produces a much larger amount of student academic achievement – than most schools today. The vision under girding these recommendations includes large changes from how most schools currently operate, because the performance improvement goals require quantum improvements. The education performance improvement challenge facing Washington and all other states in the country is to double and then triple student academic achievement over the next several years. This task cannot be accomplished by working harder in schools as we know them; educators will need to work smarter in redesigned schools. Schools will need to be restructured. All current dollars – and any new dollars required to provide the previously recommended resources – will need to be reallocated to this new, more powerful vision of a school. The vast bulk of those resources would be used for more direct services to students, for instructional purposes and for the consistent and ongoing improvement of classroom instruction. The assumption, backed by a wide variety of research, is that better classroom instruction in each core content area is the prime route to improved student performance. Funds need to focus on student needs and surround classrooms with supports that help all teachers dramatically improve their classroom instructional practices. To ensure that young students have minimum academic and social skills so they are ready to learn when they enter school, the new school vision includes preschool and full-day kindergarten, if not for all students, then at least for children entering school from low income backgrounds.

Our new school vision has small classrooms in the early elementary years, when learning to read and the basics of numeracy– the foundations for learning everything else – are critically important. The new school vision has class sizes of 25 for grades 4-12. The new school vision then has a comprehensive, integrated and rigorous professional development structure and strategy to help all teachers enhance their instructional practice in quantum leaps. The new school vision also includes intensive extra help strategies so that no student falls behind and any student struggling to learn to standards is provided immediate, intensive help to do so – tutoring in small groups. The new school vision assumes all students will take a common core of rigorous classes, with the goal of taking algebra by the eighth grade and the college preparatory curriculum in high school. The new school vision includes substantial family outreach and involvement resources. The vision includes funds so that the school can stay up-to-date with computer technology resources and tap the Worldwide Web for instructional materials and even instructional courses – when and if they become available.

It should be clear that this new vision, each element backed by evidence on its effectiveness, is very different from typical schools in Washington today. Our proposals take all current school level and instructional resources and reallocates them, plus any new resources, to a proposed set of evidence-based, proven-effective strategies. Some but not many three- and four-year olds experience preschool; we and the Early Learning Advisory Committee support a full preschool program for all three- and four-year olds (whose parents want them), particularly those from lower income families. Full-day kindergarten is not supported by the current school aid program; we support full day kindergarten for all students, beginning with those from lower income families. The

typical K-3 classroom today has 25 or more students; we propose 15, based on results from randomized experiments. Classes in grades 4-12 often have 30-35 students; we propose 25 based on best practices. Many teachers leave Washington's schools because of low salaries and little instructional support; we propose raising salaries where they are being the regional labor market, linking pay raises more to improved instructional expertise that research shows is linked to value-added student learning gains, and providing intensive instructional support. Typical professional development is usually a mile wide and an inch deep, with little if any follow through coaching; we propose intensive and ongoing professional development, with two-week summer institutes and coaching in all classrooms to instigate instructional change. Our proposed professional development resources can also be deployed for a strong new teacher induction and mentoring program, so learning how to teach will be structured rather than random. The typical intervention for students not learning to proficiency is a pull out remedial program, with untrained aides often providing the help; we propose the most effective strategy – one-to-one and small group tutoring by certified teachers, as well as academically focused extended day and summer school programs so that instructional time can vary for struggling students but performance standards held constant. In most schools, guidance counselors, social workers and other pupil support personnel work in isolation with little impact; we propose integrated family outreach-pupil support teams stressing those actions parents can take to help their children learn. For the maximum impact, our resources need to be used to deploy a more effective curriculum program, from too much whole language reading today to a balanced approach with more phonics and phonemic awareness in the early elementary years, from just basic skills in

mathematics today to mathematic concepts with applications to real-world problems, from little science today to science concepts again with applications to real-world issues, and to a stronger approach to U.S history. Our model includes ample resources for art, music, physical education and advanced work for the gifted, talented and able and ambitious student.

We should note that our new school vision does not propose additional funding for longer school years or longer days for students, except for those who need extended day academic help. It does not include small classes of 20 for students in grades 4-12, as many professional judgment adequacy studies do. The new school vision proposes no assistant principals, no deans, and no traditional instructional aides used as teacher helpers. Because the model excludes many high cost proposals and practices seen elsewhere, and our new vision is to have smaller school units, these "support" and non-instructionally oriented resources are not needed.

Over time, we seek to have a larger number of small, personalized, school units – no larger than 650 students – at all levels in the education system. This recommendation is justified by a wide range of research showing that smaller schools work better for all children, especially at the secondary level, and especially for lower income, minority and English language learning students.

Our new school vision is quite different from many schools in Washington today. The vision may not be as technologically radical as some would want, but we do not yet have evidence for a school vision laden with technology that would be better. We believe our vision could "morph" into such an even stronger vision once that is possible, and we have provided the technology resources to position schools to do so.

Evidence underlying this vision and these ambitious student performance expectations. To those who wonder whether there is a knowledge base for improving student achievement so dramatically, we would direct their inquiry to research – largely from cognitive psychology – during the past two decades. This research has shown us that all students can learn complex materials, and learn to think, understand, problem solve and communicate in written and oral form effectively. This research was nicely summarized in a recent book from the National Academy of Sciences (Bransford, Brown & Cocking, 1999), which includes chapters not only on student learning, but also on how that knowledge can be translated into curriculum standards for students and professional development for teachers. These general findings have been articulated into detailed summaries of the instructional practices most effective in teaching students mathematics (Donovan & Bransford, 2005b), science (Donovan & Bransford, 2005c) and history (Donovan & Bransford, 2005a) and join the other many syntheses of effective reading practices (e.g., Cunningham & Allington, 1994). One finding from that research is that students cannot learn to understanding and problem solving levels, unless the curriculum, instructional and testing processes are redesigned to make those demands of all students. Thus, research shows not only that the vast bulk of students from lower income, minority or English language learning backgrounds can learn complex materials, but also that these students often are the prime beneficiaries of new instructional programs that expect them to learn to those levels, and provide the extra assistance some might need to perform to those levels. Put a different way, although there is a low achievement/high poverty link today, it does not have to be that way, or at least the linkage can be much less than it is. In sum, we believe that the country, Washington and the professional

education communities have the professional knowledge base to produce the quantum improvements in student learning, including improvements for lower income and English language learning students, that would be allowed by the adequate funding models we are proposing.

Finally, to those who would quote the education production function studies as concluding that money does not make a difference, we quote from the recently published 3rd edition of the school finance text of our consultants:

> The most often cited research in this field [economic production functions] is the synthesis work of Eric Hanushek (1981, 1986, 1989, 1997). Hanushek has consistently argued that there does not appear to be a systematic relationship between the level of funding and student outcomes (see also Hanushek, 2002, on the class size debate).
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> Hanushek has now analyzed 90 different studies, with 377 separate production function equations over a 20-year time period. In his 1997 publication, he continued to argue that "These results have a simple interpretation: There is no strong or consistent relationship between school resources and student performance. In other words, there is little reason to be confident that simply adding more resources to schools as currently constituted will yield performance gains among students" (Hanushek, 1997: 148).
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> Hanushek essentially divided the 377 different findings into two major categories: those indicating a positive and those indicating a negative relationship. He compared the numbers in each category and found more negative than positive findings. He then concluded that the variation in findings was such that a systematic relationship between money and outcomes had not yet been identified...
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> Others have analyzed the same studies as Hanushek and reached opposite conclusions. Hedges, Laine and Greenwald (1994a, 1994b; see also Laine, Greenwald & Hedges, 1996; and Greenwald, Hedges & Laine, 1996a, 1996b) concluded that in fact, money can make a difference. They calculated the effect size of the different studies and, rather than counting the number of positive and negative findings, calculated an average effect size; their results produce a significantly positive effect size. The larger effects of the "positive" studies are greater than the smaller effects of the "negative" studies. Relying on this and other evidence, Hedges Laine, and Greenwald, (1994a) concluded that school spending and achievement are positively related. In his rejoinder, Hanushek (1994) argued that while there is evidence that the relationship exists, there is not

> evidence of a strong or systematic relationship. We side more with Hedges, Laine and Greenwald than with Hanushek, viewing the "effect size" as the way to summarize across studies.

We would, however, note that beyond this more arcane debate about the conclusions of economic production function studies, all analysts conclude that *it is the way money is spent that will make the largest and critical differences*. That is why the most recent National Research Council's book on school finance is entitled *Making Money Matter* (Ladd & Hansen, 1999). And, that is why our report's recommendations, if funded and implemented, would redirect school resources to those strategies for which there is evidence that they do work. As will be clear, each and every one of the Committee's proposals is backed by evidence on its effectiveness. If current and new funds in schools were used to implement the Committee's recommendations, greater student performance should result – WASL scores should rise – once again showing that it is the way money is used in schools that makes the impact on student performance real and measurable.

This vision of more effective schools is not just an academic artifact. And below we provide several examples of how this vision has been brought together in outcome oriented initiatives that have propelled student performance to impressive higher levels.

The Madison, Wisconsin Story

Madison, Wisconsin is a medium-sized urban district in south Central Wisconsin. In many ways, it is like several districts in Washington. For years, it was a relatively homogeneous community with good schools and high levels of student achievement. In the late 1980s and early 1990s, its demographics began to change. By the mid-1990s it was moving past a 25 percent low income and minority enrollment towards the 50 percent level. And as its diversity grew, so did the achievement gap between its middle class white students and the rising numbers of low income and minority, particularly, African-American students. A mid-1990s analysis of reading achievement showed that only about 30 percent of low income and African-American students met the state's third-grade reading benchmarks, and even worse, almost all such students who scored below the basic level in reading at grade 3 were below basic in grade 8 as well. In other words, if students did not read at or above the basic level by grade 3, they almost never caught up.

Something had to be done. There was a clear and urgent need to bolster the district's elementary reading program, actually its "non-reading" program because at that time the reading program varied by school, grade and classroom! And it was not working for its new students.

Using a bottom up approach that mirrored the Madison culture for any change, the system created a new, district-wide, research-based reading program over the next several years. Wanting to make sure every teacher in grades K-3 had the skills to implement that program, it expanded professional development, ultimately providing professional development in the new reading program for all its elementary teachers, including an

intensive summer induction program for all new teachers. In addition, it provided instructional coaches for all of its highest poverty schools to help all teachers incorporate the new reading strategies into their ongoing instructional practice, reduced the K-3 classrooms in those schools to 15 students, and also provided teacher tutors to help kids still struggling after experiencing the regular reading program. All these new resources – smaller class sizes, professional development, instructional coaches and teacher tutors – were supported by reallocating the resources they had been providing to their elementary schools – no new local funds were needed.

The result was a doubling over a five year time period of the percentage of low income and African-American students achieving or exceeding the proficiency level on the state's reading test, and a reduction to almost zero of the numbers of students scoring below Basic in grade 3.

The core of this story: first, dramatic instructional change in the reading program, and second, reallocated resources towards three evidence-based practices for the core instructional program– class sizes of 15 in grades K-3, instructional coaches in schools who helped teachers successfully implement new instructional approaches to reading, and teacher tutors to provide intensive, extra help to students who needed it to get above Basic and towards proficiency. As of the 2005-2006 school year, the percentage of low income and African-American students scoring at or above proficiency is ____, a huge change from the situation several years ago.

Washington's Reading First Initiative

Washington's Reading First initiative, which focuses on students in kindergarten through grade 3, shares many similarities with the Madison reading initiative and has produced even more impressive results. The goal of the program is to produce students who read at or above grade level by the end of third grade. The core of the Reading First process is a scientific research-based reading program; schools are able to select one program from a menu of programs that have been documented through rigorous research, to produce reading proficiency. We note that any educational initiative that is designed to impact student academic achievement, reflected in scores on WASL tests, must begin as a curriculum and instructional initiative; and that helps explain the many Washington initiatives embedded in the various content areas, focusing heavily on reading and mathematics, the content areas that are the foundation of every other content discipline. Designers of the federal Reading First program claim – validly from our perspective – that the country has sufficient professional knowledge to insure that all students exit third grade with proficiency in reading in English.

The Washington Reading First process takes a systemic, district approach. The K-3 comprehensive reading programs used by subgrantees align with the state's standards in reading, and provide detailed instructional advice to all staff involved in daily reading instruction including teachers and paraprofessionals. At the heart of the Reading First process is the development of a comprehensive assessment system. This system includes screening, progress monitoring, diagnostic, and program assessments. Program or "formative" assessments are commonly linked to the WASL test, but provide more detailed data to teachers on the exact knowledge, skills and understandings of

students in reading at each different grade level. These assessments are then used as guides by teachers who identify specific reading objectives and deploy explicit instructional strategies that are linked both to the state and district reading standards and to the status of the individual teachers' students reading proficiency levels. This intense classroom focus is then bolstered by a district level reading coordinator, reading coaches in all Reading First subgrantee elementary schools, and two tiers of intensive intervention for struggling students. The Reading First process is then embedded within a school that hopefully is designed to reflect the nine research-based elements of effective schools.

In K-3 Reading First classrooms, students receive 90 minutes of uninterrupted minutes of reading instruction daily. This day-to-day instructional treatment, of course, is the core of the program. And if implemented well, it should educate the bulk of K-3 students – including low income and minority students – to reading proficiency in English by the end of third grade. To insure that all staff providing reading instruction and interventions (including teachers and paraprofessionals)have the instructional expertise and capacity to deliver high- powered reading instruction, Reading First includes intensive professional development each year for its subgrantees. There are several days of intensive professional development during the summer, and ongoing professional development each month during the school year for district coordinators, principals, reading coaches, teachers and paraprofessionals. Districts and school use their Reading First grant funds to pay for local professional development in reading and for their staffs to attend state-level training events. The Reading First program provides the funds for the trainers for state-level professional development activities. Further, and very important, Reading First requires at least one reading coach in every school; the role

of the coach is to work with teachers in grades K-3 to help them implement all the new instructional strategies into their daily teaching practice.

Further, Reading First recognizes that no matter how powerful the K-3 core reading instruction program, some students will need extra help to achieve to the proficiency level. Thus, Reading First also provides funds for two tiers of intervention – 30 minutes of small group (3-5 students) tutoring for students with mild struggles, and an additional 30 minutes of small group tutoring for students with more complex difficulties. Most of the instructors for these extra help interventions are licensed teachers, but in some cases they are specially selected, trained and supervised para-professionals.

The program has produced remarkable results, equal in magnitude to the Madison results. It should be noted that most Washington Reading First schools have large numbers of students from low income and minority backgrounds, so present the toughest educational challenges. Producing performance gains in these schools, which have had the lowest levels of student academic achievement, is critical if Washington is to produce students capable of working in the knowledge- and high-skilled economy of the 21st century. The following table summaries the outcomes:

Student Performance Outcomes in Washington's 51 Reading First Elementary Schools

Performance Standard	Percent of students at this level in 1997	Percent of students at this level in 2003	Percent of students at this level in 2005
Below Basic	26	17	11
Basic	43	42	25
Proficient, Met Standard	19	32	45
Exceeded Proficiency Standard	6	8	18

Washington Reading First was introduced to these schools in 2003. The numbers show that although the schools had been making some progress over the six years from 1997 to 2003, the Reading First intervention dramatically accelerated the progress. The percent of students scoring below the basic level declined by 9 points (1.5 points a year) over the six years from 1997 to 2003, but then declined by 6 points – 3 points per year – in the first two years of Reading First, or double the previous trend. Similarly although the percent scoring at the proficient level rose from 19 to 32 percent in the six years from 1997 to 2003 – 13 points or about 2 points a year, that percent accelerated after 2003, rising by the same total amount – 13 points – but at three times the annual rate – 6 points a year, compared to the previous trend. And finally, the percent scoring at or above proficient or standard rose by 15 points from 25 to 40 percent from 1997 to 2003, but then jumped by 23 points to 63 percent in just two years from 2003 to 2005. The data showed that gains similar to these were made by all minority sub-groups in the Reading First schools – African Americans, Hispanics, and Native Americans. These significant results – on the state testing system – show that Reading First is an outcome oriented strategy that weaves together a set of resources to produce student achievement results.

But as just noted, these impressive student achievement results required resources. First, the results were anchored by a restructured reading system that reflected national and international evidence on how to teach reading effectively. Student achievement in any content area is unlikely to rise if the instruction in that content area is not altered and improved. Second, it required extensive professional development, including resources for up to ten days per year of professional development for staff providing reading instruction and intervention (including teachers and paraprofessionals), funds for the

trainers, instructional/reading coaches in every school, and additional resources to support small group and more individualized tutoring of students who struggled more and needed extra help meet state reading standards. These resources are quite similar to the resources in the Madison initiative, and all are included in the evidence-based model recommendations. Without all the resources, performance might have continued at a modest pace but not at the accelerated pace Washington's economy needs.